

硬树脂酒花颗粒

HardResin Pellets

概述 OVERVIEW

硬树脂酒花颗粒由酒花原花制成，可在煮沸过程中添加，能赋予啤酒柔顺的苦味及口感。
HardResin Pellets are a hop product made from leaf hops, added to the wort kettle during the boiling process. They impart a smooth bitterness and mouthfeel to beer.

硬树脂酒花颗粒能够释放糖苷键结合的酒花化合物，从而赋予啤酒愉悦的酒花香气。
HardResin Pellets can release glycosidically bound hop compounds to impart a pleasant hop aroma to beer.

硬树脂酒花颗粒富含抗氧化多酚。
HardResin Pellets are rich in antioxidative polyphenols.

规格 SPECIFICATIONS

- 简述 Short description:
- 去除苦味的酒花粉末（生产二氧化碳酒花浸膏时分离）压缩而成的圆柱形颗粒，可轻松崩解成粉末。
de-bittered hop powder (from production of CO² Hop extract) compressed into cylindrical pellets, which easily breaks up into a powder
- 酒花油 Hop oils:
- <0.1%
- 水分 Moisture content:
- <11%
- 蛇麻酮 Xanthohumol:
- >0.3%
- 总树脂 Total resin:
- 3.5-8.5%
- 硬树脂 Hard resin:
- 30-50%（占总树脂比例 of total resins）

性能 PACKAGING

外观 Appearance

硬树脂酒花颗粒为淡黄绿色圆柱体，尺寸约为直径8mm×长度10-25mm。
HardResin Pellets are pale yellow-green pellets, approximately 8 mm x 10 - 25 mm in size (diameter x length).

风味 Flavor

硬树脂颗粒能产生柔和的苦味。其中所含的硬树脂和多酚类物质已被证实有助于提升啤酒的口感饱满度和整体风味。此外，从酒花糖苷中释放的关键风味化合物（如里哪醇）也能产生愉悦的酒花香气。
HardResin Pellets produce a smooth bitterness. The hard resins and polyphenols in the pellets have been shown to contribute to improved mouthfeel and overall beer flavor. Moreover, key flavor compounds (e.g. linalool) released from hop glycosides produce a pleasant hop aroma.

质量 Quality

所有斯丹纳产品均在符合国际公认质量标准的设施中生产，并配备完善的残留物监测体系。
All Hopsteiner products are processed in facilities which fulfill internationally recognized quality standards. A monitoring system for residues is in place.

包装规格 PACKAGING

本产品采用标准包装规格，也可以根据客户要求提供其它规格。
Our products are delivered in their respective recommended standard packaging. Alternatives may be possible upon customer request.

美国(US)与德国(DE)加工厂的包装规格如下:

Standard packages of our processing plants in the USA (US) and Germany (DE) are:

- 五层复合铝箔袋填充惰性气体包装(US / DE)
softpack under inert gas in 5-layer aluminum composite foils (US / DE)

可根据客户需求使用其它包装规格。

Suitable pack sizes are available on request.

产品使用 USAGE

硬树脂酒花颗粒主要用于提升苦味质量和增加口感饱满度。还能通过沉淀不良蛋白质，来提高啤酒的物理稳定性。

HardResin Pellets are employed to enhance the quality of the bitterness and to increase mouthfeel. HardResin Pellets also improve the physical stability of the finished beer through the precipitation of undesirable proteins.

添加量 Dosage

硬树脂颗粒在煮沸锅中的添加量取决于其具体应用，根据酿造中使用的原料、和其他酒花产品而有所不同。本品可以在煮沸过程中的任何时间添加。由于不同品种中提供苦味、香气和风味（后者从酒花糖苷中释放）的成分质量和数量会有所差异，建议通过酿造试验来确定其对啤酒风味的影响。常用添加量为 20-100g/hl。

The quantity of HardResin Pellets added to the wort kettle depends on the application and will vary according to the raw materials and other hop products used in the brewing process. They can be added at any time during the boil. To determine their impact on beer flavor, brewing trials are recommended as the quality and quantity of the compounds imparting the bitterness, aroma and flavor (the latter are released from the hop glycosides) will vary among varieties. Typical additions range from 20 to 100 g/hl.

添加方法 Application

硬树脂酒花颗粒可由人工称量后，直接添加至麦汁中。此外，得益于其优异的流动性，本品也可实现自动化添加。

HardResin Pellets can be manually weighed out and added directly to the wort. Alternatively, owing to their free-flowing nature, additions of HardResin Pellets can be automated.

存储 Storage

建议在原包装中低于5°C (41 °F)储藏（未启封）。

The recommended storage temperature in the original unopened packaging is < 5°C (41 °F).

Short-term, transport-related temperature deviations do not affect product quality.

最佳使用时间 Best Before Date

在建议的储藏条件下，最佳使用时间为生产/包装日期后的五年。

Under the recommended storage conditions, the shelf life from the date of production/ packaging is at least 5 years.

安全性 Safety

确保工作场所通风良好，并佩戴个人防护装备。避免接触眼睛和皮肤，请勿吸入蒸汽或粉尘。更详尽的安全资料请参考斯丹纳产品安全数据表。

Ensure good ventilation of the workplace and wear personal protective equipment. Avoid contact with eyes and skin. Do not inhale vapors or dusts. For full safety information, please refer to the relevant Hopsteiner safety data sheet.

分析方法 ANALYTICAL METHODS

使用ASBC（美国酿造协会）和Analytica-EBC（欧洲酿造协会）等国际权威机构颁布的最新标准方法进行检测。

International approved methods listed in committees such as ASBC or Analytica-EBC using current standards are applied.

产品分析 Product analytics

苦味物质含量 Concentration of bitter substances

- Analytica-EBC 7.5
- Analytica-EBC 7.7 (HPLC)
- ASBC Hops-14 (HPLC)
- ASBC Hops-6A (Spectro)

酒花油含量

Concentration of hop oils

由于酒花油含量极低，目前无法通过现有方法准确测定。

Due to the low amount of hop oil, the concentration cannot be measured using any of the methods currently available.

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